

REMARKS

Claims 1-9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over LeMarie, III et al. (U.S. Patent No. 5,366,477) in view of Strait (U.S. Patent No. 2,334,449). Applicant respectfully asks the Examiner to reconsider this rejection in view of the following Remarks.

The present invention is directed to an instrument including a tool mounted on the distal end of a shaft which can be detachably secured on an activation rod by means of a tool shaft. This detachable connection is achieved by providing the tool shaft and the activation rod with protuberances and/or recesses, which can be joined in a form-locking connection, at least partially with corresponding recesses or protuberances of the other respective component. The connection is unique in that the corresponding recesses and protuberances are configured in such a way that the tool and the activation rod can be brought into engagement with one another by means of a movement exclusively in one direction essentially perpendicular to the longitudinal axis of the activation rod, and the components coupled to one another are fixed relative to one another in all other directions.

Claim 1 has previously been amended to further highlight this requirement by specifying: (i) that the tool and the activation rod can be brought into engagement with one another by means of a movement exclusively in one direction essentially perpendicular to the longitudinal axis of the activation rod, and (ii) that the components coupled to one another are nonmovably fixed relative to one another in all directions other than the one direction essentially perpendicular to the longitudinal axis of the activation rod. Thus, the components coupled to one another can be moved with respect to one another only in one direction (i.e., the one direction essentially perpendicular to the longitudinal axis of the activation rod via which the components can be brought into engagement).

LeMarie, III et al. discloses a medical instrument with a shaft, a handle mounted on the proximal end of the shaft, and a tool mounted on the distal end of the shaft. For activating the tool via the handle, both components are connected to one another by means of an activation rod. Furthermore, the tool can be secured detachably on the activation rod by means of a tool shaft, for which purpose the tool shaft and the activation rod have protuberances and/or recesses that can be joined in a form-locking connection, at least partially with corresponding recesses or protuberances of the other respective component.

In LeMarie, III et al., however, there is no disclosure, teaching or suggestion that the recesses and protuberances corresponding to one another are configured in such a way that the tool and the activation rod can be brought into engagement with one another by means of a movement exclusively in one direction essentially perpendicular to the longitudinal axis of the activation rod. The Examiner has explicitly recognized such in Paragraph 2 of the outstanding Office, instead relying upon Strait as disclosing this element not taught by LeMarie, III et al. Applicant, however, respectfully submits that Straight does not disclose, teach or suggest this element, such that any combination of LeMarie, III et al. and Straight would not render obvious the present invention, as claimed.

Straight discloses a line shaft coupling for detachably attaching and adjoining ends of a pair of shaft sections together. A male member 10 of the coupling includes a projecting stem 12 with a pair of dove-tail lugs 13 upon each of two inset sides of the stem 12, while a female member 11 of the coupling includes a notch 16 having a pair of dove-tail sockets 17 in the side walls thereof arranged in matched relation with respect to the dove-tail lugs 13. The dove-tail lugs 13 have side walls that are perpendicular to a longitudinal axis of the male member

10, and the dove-tail sockets 17 have side walls that are perpendicular to a longitudinal axis of the female member 11. Thus, the male member 10 and the female member 11 can be brought into engagement with one another by means of a movement in two directions essentially perpendicular to the longitudinal axes of the members.

More specifically, with reference to Figure 4 of Straight, the male member 10 could be positioned “over” the female member 11, and then the two can be brought into engagement by moving the male member 10 downward (i.e., in a direction into the page), or the male member 10 could be positioned “under” the female member 11, and then the two can be brought into engagement by moving the male member 10 upward (i.e., in a direction out of the page). Thus, Straight does not disclose, teach or suggest that recesses and protuberances of the pair of mating members are configured in such a way that the members can be brought into engagement with one another by means of a movement exclusively in one direction, as is required by all claims.

Moreover, this difference is a substantial one. Allowing engagement to be achieved in only one direction greatly facilitates assembly. With reference to Figures 2a and 2b of the present application, for example, in order to assemble the activation rod 6 and the tool shaft 7, the activation rod 6 can be properly aligned with the tool shaft 7, and then a downward force exerted until the activation rod 6 and the tool shaft 7 are coaxial. At this point, continued downward force can be applied to the activation rod 6 to maintain the axes of the activation rod 6 and the tool shaft 7 in proper alignment, and the assembly can be slid into hollow shaft 2. Since the activation rod 6 and the tool shaft 7 can be brought into engagement with one another by means of a movement exclusively in one direction, continued

force in the assembly direction only ensures that the two components will be maintained in proper alignment.

This is not true with coupling arrangements like those disclosed in Straight, where the members being joined can be brought into engagement with one another by means of movement in two directions essentially perpendicular to the longitudinal axes of the members. With reference to Figure 4 of Straight, for example, in order to assemble the male member 10 and the female member 11, the male member 10 could be positioned "over" the female member 11, and then the two can be brought into engagement by moving the male member 10 downward (i.e., in a direction into the page) until the male member 10 and the female member 11 are coaxial. At this point, if continued downward force is applied to the male member 10, the male member 10 would continue to move downward with respect to the female member 11 such that the axes of the members would no longer be in proper alignment, and the threaded collar 20 could not be applied until the alignment was corrected, for example by continuing to move the male member 10 upward and downward with respect to the female member 11 until proper alignment of the axes was achieved. This is much more difficult than assembly of the present invention, as claimed, in which the activation rod 6 and the tool shaft 7 can be brought into engagement with one another by means of a movement exclusively in one direction, such that continued force in the assembly direction only ensures that the two components will be maintained in proper alignment.

Moreover, It is well settled that the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination or modification. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). In the present case,

Response to Official Action
Application No. 10/662,759
Page 9

Applicant respectfully submits that there is absolutely no suggestion in either LeMarie, III et al. or Straight to modify either device such that members can be brought into engagement with one another by means of a movement exclusively in one direction. As such, Applicant respectfully submits that even if the two references were combined, the resulting device would simply be a medical instrument, as taught by LeMarie, III et al., having two members joinable together with a mating dove-tail arrangement such that the members can be brought into engagement with one another by means of movement in two directions essentially perpendicular to the longitudinal axes of the members, as taught by Straight. This is not what is claimed.

For the foregoing reasons, Applicant respectfully submits that all pending claims, namely Claims 1-9, are patentable over the references of record, and earnestly solicits allowance of the same.

Respectfully submitted,



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Response to Official Action
Application No. 10/662,759
Page 4

Amendments to the Drawings:

No amendments are made to the Drawings herein.